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Attorney's Docket No.: 16863-002001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Li-Te Chin  
Serial No. : 10/622,003  
Filed : July 16, 2003  
Title : PREPARATION OF FULLY HUMAN ANTIBODIES

Art Unit : 1644  
Examiner : Unknown

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

In accordance with the duty of disclosure as set forth in 37 C.F.R. §1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed. However, copies of the listed U.S. patents and U.S. patent application publications are not enclosed since it is no longer required to submit copies of cited U.S. patents and U.S. patent application publications in national patent applications filed after June 30, 2003, according to the July 11, 2003 waiver of the requirement.

**United States Patents/Patent Publications**

1. U.S. Patent No. 5,023,252
2. U.S. Patent No. 6,190,871
3. U.S. Patent No. 6,228,361
4. U.S. Patent No. 6,261,558
5. U.S. Patent No. 6,309,880
6. U.S. Patent No. 6,391,635
7. U.S. Patent No. 6,395,275
8. U.S. Patent No. 6,514,496
9. U.S. Patent No. 6,592,904

**CERTIFICATE OF MAILING BY EXPRESS MAIL**

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### Articles

10. Breedveld, F.C. (2000). Therapeutic monoclonal antibodies. *Lancet* 355:735-740.
11. Chin, L.T., *et al.* (1994). Site-directed primary *in vitro* immunization: production of HIV-1 neutralizing human monoclonal antibodies from seronegative donors. *Immunology* 81:428-434.
12. Chin, L.T., *et al.* (1995). Mimicking the humoral immune response *in vitro* results in antigen-specific isotype switching by autologous T helper cells: generation of human HIV-1-neutralizing igG monoclonal antibodies from naïve donors. *Eur. J. Immunol.* 25:657-663.
13. Chin, L.T., *et al.* (2001). Establishment and evaluation of mouse-human heteromyeloma cell lines obtained by electrofusion for immortalizing human immunoglobulins. *J. Biomed. Lab. Sci.* 13(4):117-123.
14. Co, M.S., *et al.* (1991). Humanized antibodies for antiviral therapy. *Proc. Natl. Acad. Sci. USA* 88:2869-2873.
15. Demotz, S., *et al.* (1989). Delineation of several DR-restricted tetanus toxin T cell epitopes. *J. Immunol.* 142:394-402.
16. Dragic, T. (2001). An overview of the determinants of CCR5 and CXCR4 co-receptor function. *J. General Virology* 82:1807-1814.
17. Dueñas, M., *et al.* (1996). *In vitro* immunization of naive human B cells yields high affinity immunoglobulin G antibodies as illustrated by phage display. *Immunology* 89(1):1-7.
18. Hahn, B.H., *et al.* (1986). Genetic variation in HTLV-III/LAV over time in patients with AIDS or at risk for AIDS. *Science* 232:1548-1553.
19. Hahn, B.H., *et al.* (1985). Genomic diversity of the acquired immunodeficiency syndrome virus HTLV-III: different viruses exhibit greatest divergence in their envelope genes. *Proc. Natl. Acad. Sci. USA* 82(14):4813-4817.
20. Hill, C.M., *et al.* (1997). Envelope glycoproteins from human immunodeficiency virus types 1 and 2 and simian immunodeficiency virus can use human CCR5 as a coreceptor for viral entry and make direct CD4-dependent interactions with this chemokine receptor. *J. Virol.* 71(9):6296-6304.

21. Korber, B.T.M., *et al.* (Editors). *HIV Molecular Immunology* 2001. Publisher: Los Alamos National Laboratory, Theoretical Biology and Biophysics, Los Alamos, New Mexico. LA-UR 02-2877.
22. Kuhmann, S.E., *et al.* (2000). Cooperation of multiple CCR5 coreceptors is required for infections by human immunodeficiency virus type 1. *J. Virol.* 74(15):7005-7015.
23. Lee, B., *et al.* (1999). Quantification of CD4, CCR5, and CXCR4 levels on lymphocyte subsets, dendritic cells, and differentially conditioned monocyte-derived macrophages: *Proc. Natl. Acad. Sci. USA* 96:5215-5220.
24. Modrow, S., *et al.* (1987). Computer-assisted analysis of envelope protein sequences of seven human immunodeficiency virus isolates: prediction of antigenic epitopes in conserved and variable regions. *J. Virol.* 61:570-578.
25. Nermut, M.V., *et al.* (1993). Further evidence of icosahedral symmetry in human and simian immunodeficiency virus. *AIDS Res. Hum. Retroviruses* 9:929-938.
26. Ohlin, M., *et al.* (1989). The effect of leucyl-leucine methyl ester on proliferation and Ig secretion of EBV-transformed human B lymphocytes. *Immunology* 66:485-490.
27. Ohlin, M., *et al.* (1992). Epstein-Barr virus-induced transformation of human B lymphocytes: the effect of L-leucyl-L-leucine methyl ester on inhibitory T cell populations. *Immunol. Lett.* 34:221-228.
28. Peeters, M. (2000). Recombinant HIV sequences: their role in the global epidemic. *Recombinant HIV Sequences*, pp. I39-I54.
29. Shiino, T., *et al.* (2000). A group of V3 sequences from human immunodeficiency virus type 1 subtype E non-syncytium-inducing, CCR5-using variants are resistant to positive selection pressure. *J. Virol.* 74(3):1069-1078.
30. Staudinger, R., *et al.* (2003). Evidence for CD4-enhanced signaling through the chemokine receptor CCR5. *J Biol. Chem.* 278:10389-10392.
31. Thomson M.M., *et al.* (2002). Molecular epidemiology of HIV-1 genetic forms and its significance for vaccine development and therapy. *Lancet Infect. Dis.* 2:461-471.
32. van Dijk, M.A. and van de Winkel, J.G.J. (2001). Human antibodies as next generation therapeutics. *Curr. Opin. Chem. Biol.* 5(4):368-374.

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33. Weiner, L.M. (1999). An overview of monoclonal antibody therapy of cancer. *Semin. Oncol.* 26(4):41-50.
34. Wu, H., *et al.* (1996). Kinetic and structural analysis of mutant CD4 receptors that are defective in HIV gp120 binding. *Proc. Natl. Acad. Sci. USA* 93:15030-15035.
35. Wyatt, R., *et al.* (1995). Involvement of the V1/V2 variable loop structure in the exposure of human immunodeficiency virus type 1 gp120 epitopes induced by receptor binding. *J. Virol.* 69:5723-5733.
36. Zafiroopoulos, A., *et al.* (1997). Induction of antigen-specific isotype switching by *in vitro* immunization of human naive B lymphocytes. *J. Immunol. Methods* 200(1-2):181-190.

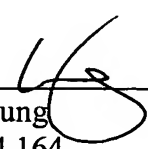
This Information Disclosure Statement is being submitted before any office action on the merit is issued. Consequently, no fee is required pursuant to 37 C.F.R. §1.97(b).

By citing the above references, Applicants do not acquiesce or admit that any of these documents is "prior art" under 35 U.S.C. Applicants specifically reserve the right, where appropriate, to antedate any of the cited documents by an appropriate showing under 37 C.F.R. §1.131, §1.604, §1.608 or any other suitable means.

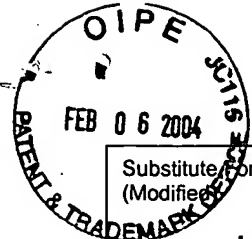
To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: Feb. 6, 2004

  
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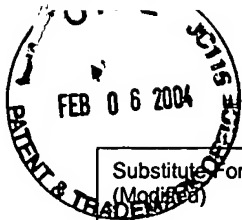
Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 16863-002001	Application No. 10/622,003
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant <b>Li-Te Chin</b>	
		Filing Date July 16, 2003	Group Art Unit 1644

U.S. Patent Documents							
Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,023,252	06/11/2001	Hseih			
	AB	6,190,871	02/20/2001	Ho, et al.			
	AC	6,228,361	05/08/2001	Posner			
	AD	6,261,558	07/17/2001	Barbas, et al.			
	AE	6,309,880	10/30/2001	Chang, et al.			
	AF	6,391,635	05/21/2002	Rodman			
	AG	6,395,275	05/28/2002	Barbas, et al.			
	AH	6,514,496	02/04/2003	Platz, et al.			
	AI	6,592,904	07/15/2003	Platz, et al.			
	AJ						
	AK						

Foreign Patent Documents or Published Foreign Patent Applications								
Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AL							
	AM							
	AN							
	AO							
	AP							

Other Documents (include Author, Title, Date, and Place of Publication)		
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	AQ	Breedveld, F.C. (2000). Therapeutic monoclonal antibodies. Lancet 355:735-740.
	AR	Chin, L.T., et al. (1994). Site-directed primary <i>in vitro</i> immunization: production of HIV-1 neutralizing human monoclonal antibodies from seronegative donors. Immunology 81:428-434.
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	AT	Chin, L.T., et al. (2001). Establishment and evaluation of mouse-human heteromyeloma cell lines obtained by electrofusion for immortalizing human immunoglobulins. J. Biomed. Lab. Sci. 13(4):117-123.

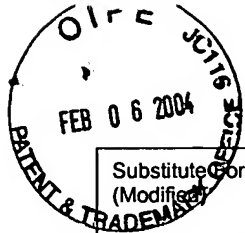
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	ACC	Kuhmann, S.E., <i>et al.</i> (2000). Cooperation of multiple CCR5 coreceptors is required for infections by human immunodeficiency virus type 1. <i>J. Virol.</i> 74(15):7005-7015.
	ADD	Lee, B., <i>et al.</i> (1999). Quantification of CD4, CCR5, and CXCR4 levels on lymphocyte subsets, dendritic cells, and differentially conditioned monocyte-derived macrophages. <i>Proc. Natl. Acad. Sci. USA</i> 96:5215-5220.
	AEE	Modrow, S., <i>et al.</i> (1987). Computer-assisted analysis of envelope protein sequences of seven human immunodeficiency virus isolates: prediction of antigenic epitopes in conserved and variable regions. <i>J. Virol.</i> 61:570-578.
	AFF	Nermut, M.V., <i>et al.</i> (1993). Further evidence of icosahedral symmetry in human and simian immunodeficiency virus. <i>AIDS Res. Hum. Retroviruses</i> 9:929-938.
	AGG	Ohlin, M., <i>et al.</i> (1989). The effect of leucyl-leucine methyl ester on proliferation and Ig secretion of EBV-transformed human B lymphocytes. <i>Immunology</i> 66:485-490.
	AHH	Ohlin, M., <i>et al.</i> (1992). Epstein-Barr virus-induced transformation of human B lymphocytes: the effect of L-leucyl-L-leucine methyl ester on inhibitory T cell-populations. <i>Immunol. Lett.</i> 34:221-228.
	AII	Peeters, M. (2000). Recombinant HIV sequences: their role in the global epidemic. <i>Recombinant HIV Sequences</i> , pp. I39-I54.
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	AKK	Staudinger, R., <i>et al.</i> (2003). Evidence for CD4-enhanced signaling through the chemokine receptor CCR5. <i>J. Biol. Chem.</i> 278:10389-10392.
	ALL	Thomson M.M., <i>et al.</i> (2002). Molecular epidemiology of HIV-1 genetic forms and its significance for vaccine development and therapy. <i>Lancet Infect. Dis.</i> 2:461-471.

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	AMM	van Dijk, M.A. and van de Winkel, J.G.J. (2001). Human antibodies as next generation therapeutics. <i>Curr. Opin. Chem. Biol.</i> 5(4):368-374.
	ANN	Weiner, L.M. (1999). An overview of monoclonal antibody therapy of cancer. <i>Semin. Oncol.</i> 26(4):41-50.
	AOO	Wu, H., <i>et al.</i> (1996). Kinetic and structural analysis of mutant CD4 receptors that are defective in HIV gp120 binding. <i>Proc. Natl. Acad. Sci. USA</i> 93:15030-15035.
	APP	Wyatt, R., <i>et al.</i> (1995). Involvement of the V1/V2 variable loop structure in the exposure of human immunodeficiency virus type 1 gp120 epitopes induced by receptor binding. <i>J. Virol.</i> 69:5723-5733.
	AQQ	Zafiroopoulos, A., <i>et al.</i> (1997). Induction of antigen-specific isotype switching by <i>in vitro</i> immunization of human naive B lymphocytes. <i>J. Immunol. Methods</i> 200(1-2):181-190.

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